

Liquid Penetrant Examination Report

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| Procedure: WI-10-26 (Revision 10/20/04) Liquid Penetrant Type: Visible Penetrant Type: Magnaflux SKL-WP or SKL-HF/SKL-6 | Developer Type: Magnaflux SKO-S2 Cleaner: Spot Check: SKC-5 All Personnel Certified to ASME and SNT-TC-1A Level II | Lighting: General lighting assisted by portable lighting, 100 F.T.C minimum |
| Use the following abbreviations for Material Thickness of items tested: Mat'l Thickness: HB) Header Body EP) End Piece(s) N) Nozzle D) Disk PP) Perforated Plate SP) Splitter Plate MS) Mercury Strips G) Gusset(s) IN) Injection Nozzle TJ) Transition Joint E) Elbow SGP) Sparge Pipe | | |
| Use the following abbreviations for Mapped Indications of items tested: <i>If more than one indication of the same type is on the same weld joint use the following abbreviation: (#) (Where # is the number of indications)</i> Material Description: 1) End Piece/Header Body Welds 2) Nozzle/Header Body Welds 3) Header Body Seam Welds 4) Nozzle Seam Welds 5) Perm. Disk 6) Perm Disk/Nozzle Weld 7) Pipe Seam Weld 8) Elbow Seam Weld 9) Transition Seam Weld 10) Mercury Strip Welds 11) Perforated Plate Welds 12) Splitter Plate 13) Sparge Pipe Welds 14) Header Body Material 15) Nozzle Material 16) Mitered End Piece Material Indication: 0) No Indications 1) Rounded 2) Linear 3) Porosity 4) Non-Fusion 5) Cold Roll 6) Splatter 7) Lamination Relevant Indications: N) Non-rejectable R) Rejectable (Must Repair) | | |
| Use the following abbreviations for accepting/rejecting of item tested Results: A) Accepted R) Rejected AR) Accepted after Repair(s) | | |
| Example of a Mapped Indication: A pipe seam weld with 4 relevant linear indications that needs repaired would be (4)7-2-R (if it were only 1 repair it would just be 7-2-R) | | |

| | | Sales Order # | | 509.8-12 | | | |
|------------|--|-------------------------|--------------------|-----------|-----------|----------|---------|
| Item # (s) | Description of Weld Joint or Material LPT Examined | Material & Thickness | Map of Indications | Test Date | Test Time | Examiner | Results |
| 1302 | A-IN | (HB.375)(EP1.00)(N.375) | 0 | 3/9/2005 | 1330 | P6 | A |
| 1303 | A-OUT | HB.250 EP.500 N.322W | 0 | 3/9/2005 | 1400 | P6 | A |
| 1304 | B-IN | HB.100 EP1.00 N.432W | 0 | 3/7/2005 | 1400 | P6 | A |
| 1305 | B-OUT | HB.750 EP.750 N.432W | 0 | 3/9/2005 | 1300 | P6 | A |
| 1306 | C-IN | (HB.750)(EP.750)(N.237) | 1-2-R | 3/10/2005 | 0800 | P7/P7 | AR |
| 1307 | C-OUT | HB.375 EP.625 N.216W | 0 | 3/9/2005 | 0930 | P6 | A |
| 1308 | D-IN | (HB.375)(EP.625)(N.154) | 0 | 3/9/2005 | 0945 | P7 | A |
| 1309 | D-OUT | HB-.500EP-1.0N-.237 | 0 | 3/6/2005 | 1245 | P14 | A |

Liquid Penetrant Examination Report

| Procedure: WI 10-26 (Revision 10/20/04) | | Developer Type: Magnaflux SKD-S2 | | Lighting: General lighting assisted by portable lighting, 100 F.T.C. minimum | | | |
|---|--|--|--------------------|--|-----------|----------|---------|
| Liquid Penetrant Type: Visible | | Cleaner: Spot Check: SKC-5 | | | | | |
| Penetrant Type: Magnaflux SKL-WP or SKL-HF/SKL-6 | | All Personnel Certified to ASME and SNT-TC-1A Level II | | | | | |
| <p>Use the following abbreviations for Material Thickness of items tested:</p> <p>Mat'l Thickness: HB) Header Body EP) End Piece(s) N) Nozzle D) Disk PP) Perforated Plate SP) Splitter Plate MS) Mercury Strips G) Gusset(s) IN) Injection Nozzle TJ) Transition Joint E) Elbow SGP) Sparge Pipe</p> | | | | | | | |
| <p>Use the following abbreviations for Mapped Indications of items tested:</p> <p><i>If more than one indication of the same type is on the same weld joint use the following abbreviation: (#) (Where # is the number of indications)</i></p> <p>Material Description: 1) End Piece/Header Body Welds 2) Nozzle/Header Body Welds 3) Header Body Seam Welds 4) Nozzle Seam Welds 5) Perm. Disk 6) Perm Disk/Nozzle Weld 7) Pipe Seam Weld 8) Elbow Seam Weld 9) Transition Seam Weld 10) Mercury Strip Welds 11) Perforated Plate Welds 12) Splitter Plate 13) Sparge Pipe Welds 14) Header Body Material 15) Nozzle Material 16) Mitered End Piece Material</p> <p>Indication: 0) No Indications 1) Rounded 2) Linear 3) Porosity 4) Non-Fusion 5) Cold Roll 6) Splatter 7) Lamination Relevant Indications: N) Non-rejectable R) Rejectable (Must Repair)</p> | | | | | | | |
| <p>Use the following abbreviations for accepting/rejecting of item tested</p> <p>Results: A) Accepted R) Rejected AR) Accepted after Repair(s)</p> | | | | | | | |
| Example of a Mapped Indication: A pipe seam weld with 4 relevant linear indications that needs repaired would be (4)7-2-R (if it were only 1 repair it would just be 7-2-R) | | | | | | | |
| Sales Order # | | 509.8-12 | | | | | |
| Item # (s) | Description of Weld Joint or Material LPT Examined | Material & Thickness | Map of Indications | Test Date | Test Time | Examiner | Results |
| 1310 | E-IN | (HB.203)(EP.375)(N.145) | 2-2-R | 3/9/2005 | 0830 | P6/P7 | AR |
| 1311 | E-OUT | (HB.375)(EP1.00)(N.216) | 0 | 3/9/2005 | 0945 | P7 | A |
| 1312 | F-IN | (HB.250)(EP.375)(N.365) | 0 | 3/9/2005 | 0945 | P7 | A |
| 1313 | F-OUT | (HB.250)(EP.375)(N.375) | 0 | 3/9/2005 | 1300 | P7 | A |
| 1314 | G-IN | HB-.250 EP-.375 N-.250 | 0 | 3/7/2005 | 0800 | P6 | A |
| 1315 | G-OUT | HB.250 EP.500 N.250 | 0 | 3/9/2005 | 1230 | P6 | A |
| 1464 | NOZZLE SEAM | (N.250) | 0 | 2/28/2005 | 0730 | P7 | A |
| 1468 | NOZZLE SEAM | (N.250) | 0 | 2/28/2005 | 0945 | P7 | A |

Liquid Penetrant Examination Report

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|--|--|---|--------------------|---|-----------|
| Procedure: W1 T0-28 (Revision 10/20/04) Liquid Penetrant Type: Visible Penetrant Type: Magnaflux SKL-WP or SKL-HF/SKL-6 | | Developer Type: Magnaflux SKD-S2 Cleaner: Spot Check: SKC-5 All Personnel Certified to ASME and SNT-TC-1A, Level II | | Lighting: General lighting assisted by portable lighting, 100 F1C minimum | |
| Use the following abbreviations for Material Thickness of items tested: Mat'l Thickness: HB) Header Body EP) End Piece(s) N) Nozzle D) Disk PP) Perforated Plate SP) Splitter Plate MS) Mercury Strips G) Gusset(s) IN) Injection Nozzle TJ) Transition Joint E) Elbow SGP) Sparge Pipe | | | | | |
| Use the following abbreviations for Mapped Indications of items tested: <i>If more than one indication of the same type is on the same weld joint use the following abbreviation: (#) (Where # is the number of indications)</i> Material Description: 1) End Piece/Header Body Welds 2) Nozzle/Header Body Welds 3) Header Body Seam Welds 4) Nozzle Seam Welds 5) Perm. Disk 6) Perm Disk/Nozzle Weld 7) Pipe Seam Weld 8) Elbow Seam Weld 9) Transition Seam Weld 10) Mercury Strip Welds 11) Perforated Plate Welds 12) Splitter Plate 13) Sparge Pipe Welds 14) Header Body Material 15) Nozzle Material 16) Mitered End Piece Material Indication: 0) No Indications 1) Rounded 2) Linear 3) Porosity 4) Non-Fusion 5) Cold Roll 6) Splatter 7) Lamination Relevant Indications: N) Non-rejectable R) Rejectable (Must Repair) | | | | | |
| Use the following abbreviations for accepting/rejecting of item tested Results: A) Accepted R) Rejected AR) Accepted after Repair(s) | | | | | |
| Example of a Mapped Indication: A pipe seam weld with 4 relevant linear indications that needs repaired would be (4)7-2-R (if it were only 1 repair it would just be 7-2-R) | | | | | |
| Sales Order # | | 509.8-12 | | | |
| Item # (s) | Description of Weld Joint or Material LPT Examined | Material & Thickness | Map of Indications | Test Date | Test Time |
| 1477 | PERM DISK B/4 | (D.625) | 0 | 3/2/2005 | 1145 |
| | | | | Examiner | Results |
| | | | | P7 | A |

LIQUID PENETRANT EXAMINATION REPORT

Procedure: WI 10-26 (Revision 10/20/04)

Liquid Penetrant Type: Visible

Penetrant Type: Magnaflux SKL-WP or SKL-HF/SKL-6

Developer Type: Magnaflux SKD-S2

Cleaner: Spot Check: SKC-5

All Personnel Certified to ASME and SNT-TC-1A Level II

Lighting: General lighting assisted by portable lighting, 100 FTC minimum

| Area Being Examined | Examiner | Test Date & Time | Weld Joint | Material & Thickness | Map of Indications | Results |
|---------------------|----------|------------------|-------------|----------------------|--------------------|---------|
| A IN | PK | 3-15-05 1000 | HDR TO CORN | HB .375 N 375 | 0 | A |
| A OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .375 | 0 | A |
| B IN | PK | 3-15-05 1000 | HDR TO CORN | HB 1.00 N .437 | 0 | A |
| B OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .437 | 0 | A |
| B IN | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .237 | 0 | A |
| C OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .375 N .216 | 0 | A |
| D IN | PK | 3-15-05 1000 | HDR TO CORN | HB .375 N .054 | 1 (29) R | A |
| D OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .500 N .237 | 0 | A |
| E IN | PK | 3-15-05 1000 | HDR TO CORN | HB .205 N .435 | 0 | A |
| E OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .375 N .216 | 0 | A |
| F IN | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .365 | 0 | A |
| F OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .375 | 0 | A |
| G IN | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .250 | 0 | A |
| G OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .250 | 0 | A |
| AN IN | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .250 | 0 | A |
| AN OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .250 | 0 | A |
| AN IN | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .250 | 0 | A |
| AN OUT | PK | 3-15-05 1000 | HDR TO CORN | HB .250 N .250 | 0 | A |